

REMARKS

I. Status of Claims

Claims 1-8 are pending. The Examiner has rejected claims 1 and 3 under 35 U.S.C. § 102(b) and has further rejected claims 1 and 6-8 under 35 U.S.C. § 102(e). Finally, the Examiner rejected claims 2, 4, and 5 under 35 U.S.C. § 103(a). By this amendment, Applicants have cancelled claims 3 and 4 and amended claim 1. Support for this amendment to claim 1 can be found, for example in the originally filed specification and claims, for example claims 3 and 4. No new matter is added by this amendment.

II. Ohya et al.

A. § 102(b) Rejection over Ohya

The Examiner has rejected claims 1 and 3 under 35 U.S.C. § 102(b) as anticipated by Ohya et al. (XP-001023196, hereinafter "Ohya"). The Examiner alleges that Ohya teaches "a process for depleting monovalent cations from water by subjecting to [reverse osmosis], and then subjecting the [reverse osmosis] retentate to electrodialysis, and recovering water depleted in monovalent cations." Office Action at 2. Furthermore, the Examiner alleges that Ohya teaches the recovery of more than 65% of the divalent cations and about 100% yield of water depleted in monovalent cations, as in instant claim 3. *Id.* Applicants respectfully traverse this rejection as it applies to claim 1, as amended, and point out that claim 3 has been cancelled herein.

A claim is only anticipated if "each and every element, as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." M.P.E.P. § 2131. Ohya nowhere teaches or suggests depleting monovalent cations from water which comprises about 3 g/L of total ions or less. To the contrary, Ohya deals solely

with salt water. It is known that salt water has a very high load of inorganic salts (i.e., total ions), for example around 33 g/L. See Instant Specification at page 2, lines 30-33. Thus, the Examiner has failed to establish that the present invention, directed towards depleting monovalent cations from water which comprises about 3 g/L of total ions or less, is taught by a system directed towards depleting ions from salt water, which comprises about 33 g/L.

In light of the fact that Ohya does not teach every element of claim 1, as amended, Applicants respectfully request the prompt withdrawal of the § 102(b) rejection.

B. § 103(a) Rejection over Ohya in view of Conger

The Examiner has rejected claim 2 under 35 U.S.C. § 103(a) as obvious over Ohya in view of Conger et al., U.S. Patent No. 4,141,825 (hereinafter "Conger"). As discussed above, Ohya does not teach or suggest all of the elements of the present claims, including claim 2, which is dependent upon claim 1. Conger does not rectify this deficiency. Therefore, Applicants respectfully request reconsideration of the § 103 rejection over Ohya in view of Conger.

III. Abe et al.

A. § 102(e) Rejection over Abe

The Examiner has rejected claims 1 and 6-8 under 35 U.S.C. § 102(e) as anticipated by Abe et al., U.S. Patent No. 6,187,201 B1 (hereinafter "Abe"). According to the Examiner, "Abe . . . teaches a process for depleting monovalent cations from water comprising subjecting the water to reverse osmosis (5-fig 1), [subjecting the] retentate of the [reverse osmosis] to electrodialysis (7-fig 1) and recovering [water]

depleted . . . in monovalent cations (col 2 lines 18-40) as in instant claim 1.” Office Action at 3. Claim 1 has been amended to recite more clearly that, unlike the process in Abe, the yield of water depleted in monovalent cations is about 100% and the yield of divalent cations is at least about 65%.

The Examiner has not shown that Abe teaches obtaining a yield of divalent cations that is at least about 65%. Instead, Abe is directed towards producing “ultra-pure water.” See, e.g., Abe at Title and Abstract. Abe touts its ability to produce ultra-pure water with little to no yield of divalent cations, stating that the invention of Abe “allowed production of ultra-pure water with extremely reduced concentrations of cations and anions” and “the use of the present system enables a stable production of ultra-pure water in which the concentrations of cations and anions are 0.1 ppm or less.” Abe, col. 6, ll. 37-49, 59-62. Specifically, Table 1 in Abe reports a yield of water containing 0.00 mg/L divalent cations. See Abe, col. 6, l. 10. This yield, which is 0%, nowhere approaches a yield of divalent cations that is at least about 65%, as claimed in claim 1.

Additionally, claim 1, as amended, requires the process follow the steps in a specific, successive order. This order of successive steps is different from the order taught by Abe, wherein “a reverse osmosis unit 5 [] is connected after the electrodialysis unit 1 in series.” Abe Abstract (emphasis added).

Thus, the Examiner has not established that Abe teaches all of the elements of the present invention, and Applicants respectfully request the withdrawal of this grounds for rejection.

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B. §103(a) Rejection over Abe in view of Conger

The Examiner has rejected claims 4 and 5 under 35 U.S.C. § 103(a) as obvious over Abe in view of Conger. As discussed above, Abe does not teach or suggest all of the elements of the present claims, including claims 4 and 5, which are dependent upon claim 1. Conger does not rectify this deficiency. Therefore, Applicants respectfully request reconsideration of the § 103 rejection over Abe in view of Conger.

IV. Conclusion

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-8 in condition for allowance. Applicants submit that the proposed amendment of claim 1 does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicant's invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

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In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: February 2, 2004

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